

#### ABSTRACT OF THE DISCLOSURE

A four-layer structured hard mask composed of a SiC film, a first SiO<sub>2</sub> film, a SiC film, and a second SiO<sub>2</sub> film is formed on a porous silica film as an interlayer insulating film. Then, the second SiO<sub>2</sub> film is etched with a resist mask. Subsequently, the SiC film is etched with the second SiO<sub>2</sub> film. Thereafter, the first SiO<sub>2</sub> film is etched with the SiC film. Subsequently, the SiC film is etched with the SiC film. Then, by etching the porous silica film with the SiC film, a wiring trench is formed. At this time, a selection ratio between the SiC film and the porous silica film is large, so that deformation of the SiC film rarely occurs, which prevents leakage caused by the deformation.